C. Remarks

In order to expedite prosecution of the subject application, Applicants would like to conduct a personal interview with the Examiner. Accordingly, if such an interview has not been scheduled, the Examiner is requested to contact Applicants' attorney prior to issuing a new action on the merits.

The claims are 1-33, with claims 1 and 31 being independent. The independent claims have been amended to clarify the present invention. Support for this amendment may be found throughout the specification, including the Examples, and, inter alia, on page 57, lines 27-29. Claim 11 has been amended to improve to resolve section 112, second paragraph, issues. New claims 32 and 33 have been added, as supported by originally filed claim 11. No new matter has been added. Reconsideration of the present claims is expressly requested.

Claims 11-13 stand rejected under 35 U.S.C. § 112, second paragraph, as being allegedly indefinite. Applicants have amended claim 11 to resolve this issue. Accordingly, the indefiniteness rejection should be withdrawn.

Claims 1-8 and 11-30 stand rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by WO 95/02654 (Killick). Claims 1-9 and 11-31 stand rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by EP 0 121 089 A2 (Majunke). Claims 1-8 and 11-31 stand rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by U.S. Patent No. 4,356,001 (Sweeney). Claims 1-8 and 11-31 stand rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by U.S. Patent No. 5,405,417 (Cunningham). Claims 1-8 and 11-31 stand rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by U.S. Patent No. 4,892,562 (Bowers). Claims 1-8 and 11-31 stand rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by U.S. Patent No. 4,746,420 (Darian). Claims 1-8 and 11-31 stand rejected under 35 U.S.C. § 102(b) as

being allegedly anticipated by U.S. Patent No. 4,549,883 (Purcell). Claims 1-8 and 11-31 stand rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by U.S. Patent No. 4,522,630 (Seemuth '630). Claims 1-8 and 11-31 stand rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by U.S. Patent No. 4,536,190 (Seemuth '190). Claims 1-8 and 11-31 stand rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by U.S. Patent No. 5,766,272 (Lozzi). Claims 1-8 and 11-31 stand rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by U.S. Patent No. 4,509,950 (Baker) and GB 2,115,002A. Claims 1-8 and 11-31 stand rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by EP 014 992 (Oppenlaender). These rejections are respectfully traversed.

Prior to addressing the merits of the rejections, Applicants would like to briefly review some of the key features and advantages of the presently claimed invention. The present invention is directed to a motor fuel composition for use in a diesel, gas-turbine or turbojet engine comprising at least two oxygen-containing compounds, which contain in total at least four different oxygen-containing functional groups selected from an alcohol, ether, aldehyde, ketone, ester, inorganic ester, acetal, epoxide and a peroxide. Each oxygen-containing organic compound contains at least one of these oxygen-containing groups. Also, the motor fuel composition of the present invention can contain a hydrocarbon component. As a result, this motor fuel composition produces fewer harmful pollutants upon combustion than conventional motor fuels.

Killick discloses a fuel composition comprising ethanol, methanol, ethyl oleate and butyl benzoate (Composition 9). While these compounds have four oxygen-containing groups, these four groups are not all different from each other. Specifically, this fuel composition only has two different oxygen-containing groups: a hydroxy group and an ester group. Furthermore, this reference is silent with respect to its fuel's exhaust

emissions, let alone any reduction of harmful pollutants. Also, Killick is silent with respect to the stability of the fuel. Thus, Killick cannot anticipate the present invention.

Majunke is directed solely to fuel for gasoline engines. Since the present claims are related to fuel for diesel, gas-turbine and turbojet engines, this reference clearly cannot anticipate the presently claimed invention.

Sweeney is directed to a fuel composition comprising a mixture of alcohols and ethers. Alcohols and ethers, however, provide only two different oxygen-containing groups. Furthermore, this reference is silent with respect to exhaust emissions of its fuel. Accordingly, it is clear that Sweeney cannot anticipate the present invention.

Cunningham is directed to a fuel composition comprising peroxy esters and one or more organic nitrate esters. Typical organic peroxides are defined in the subject specification at page 19, lines 23-32, as compounds of the formula R-O-O-R', where R and/or R' can be an oxygen-substituted alkyl, such as an alkanoic group. The specification discloses tert-butyl peroxy-acetate, which is a peroxy ester, as an example of a peroxide having one oxygen-containing functional group. The only peroxide-type compound that is considered to have two oxygen-containing groups is a hydroperoxide. Therefore, it is clear that a peroxy ester compound disclosed in Cunningham has only one oxygen-containing group, a peroxide, according to the present invention. Thus, the compounds in this reference have only three different oxygen-containing groups: a peroxide, an ether and an inorganic ester. Clearly, Cunningham cannot anticipate the present invention.

Bowers teaches that emission of harmful pollutants resulting from combustion of diesel fuel can be achieved by adding a platinum compound to the fuel. The Examiner alleged that Bowers teaches a fuel composition comprising palladium acetyl acetonate and an oxygentated solvent, which may be a mixture of tetrahydrofuran, methyl tertiary butyl ether and octyl nitrate. Applicants respectfully disagree.

Claim 8 in Bowers states that a solvent for use with a platinum coordination compound can consist of combinations of ethanol, octyl nitrate, tetrahydrofuran and methyl tertiary butyl ether. However, the specification lacks any mention of a single such combination, let alone a disclosure directed to using such a combination with metal acetylacetonates. The only metal acetylacetonate is disclosed in Table 6, where palladium acetylacetonate is used with a single-component solvent: octyl nitrate.

Since the sole reference to a combination of compounds in a solvent is in claim 8, with the specification providing no teaching with regard to even a single specific combination, the Examiner's interpretation amounts to no more than hindsight reasoning. A skilled artisan would be motivated to use only one compound as the solvent because using a combination of compounds increases costs without providing any disclosed benefit.

There is no disclosure in Bowers that suggests that using a one-component solvent is somehow insufficient or that using more than compound is in any way advantageous. In fact, only one compound is used as a solvent in all examples in this reference. Therefore, it is clear that Bowers cannot anticipate the present invention.

Darian discloses a method for improving diesel fuel originating from off-specification diesel oils. In this method, the diesel oil is reacted with a nitrogenous treating compound and the deleterious by-products are extracted by using a solvent and a co-solvent, which are both immiscible in diesel fuel. Then, the solvent and the co-solvent are separated from the fuel.

The Examiner alleged that prior to separation of the solvent and the co-solvent from the diesel oil, the combination anticipates claim 1. Applicants respectfully disagree.

The combination of the reacted diesel oil, the solvent and the co-solvent is not a stable motor fuel composition. Since the solvent and the co-solvent are immiscible in

diesel fuel, this combination is neither stable nor a fuel within the meaning of the present invention. Darian teaches that a usable diesel fuel is obtained only after the separation. Accordingly, it is clear that this reference cannot anticipate the present invention.

Purcell teaches a fuel composition comprising a cetane improver or mixtures thereof, including 5-methyl-5-nitro-3-oxo-hexanol. The Examiner's rejection is based on the presence of the NO_2 group, the nitro group and two ether groups.

Clearly, this is a disclosure of only two different oxygen-containing groups. The NO_2 group is not an oxygen-containing group according to the present invention and the ether groups constitute only one different oxygen-containing group. Accordingly, Purcell cannot anticipate the present invention.

Seemuth '630 discloses a mixture of alcohols and tetrahydro-2,5-furandimethanol dinitrate. However, this mixture contains at most three different oxygen-containing groups: an ether, an inorganic ester and an alcohol. Furthermore, this reference is silent with respect to exhaust emissions obtained from combustion of its fuel. Thus, clearly, Seemuth '630 cannot anticipate the present invention.

Seemuth '190 discloses a fuel composition comprising a combination of nitrates. However, such a combination provides, at most, only two different oxygen-containing groups (see, e.g., col. 3, line 40 - col. 4, line 40). Furthermore, the additive in this reference, even in the form proposed for use, remains dangerously explosive and sensitive to mechanical impact. The index characterizing the explosive danger of the Seemuth '190 additives shows that these additives vary from being extremely dangerous to merely dangerous. Accordingly, it is clear that the presently claimed invention cannot be anticipated by Seemuth '190.

Lozzi discloses a fuel additive combination of dimethyl carbonate, ethylic aldehyde and ethyl nitrate. This combination, however, provides, at most, three different

oxygen-containing functional groups. Therefore, Lozzi cannot anticipate the present invention.

Baker and GB 2,115,002A disclose a fuel compositing comprising ethanol and a surfactant blend comprising poly(12-hydroxystearic acid) and polyethylene glycol. However, this composition has only three different oxygen-containing groups: an ester and an ether within the polymeric chain and possibly a hydroxyl group in the chain termini. Clearly, Baker cannot anticipate the present invention.

Oppenlaender discloses a fuel composition containing, at most, a combination of polyethers, acetals, ethanol and methanol. This combination has only three different oxygen-containing groups. Accordingly, Oppenlaender cannot anticipate the present invention.

Wherefore, Applicants respectfully request that all outstanding rejection be withdrawn and the present case be passed to issue.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address given below.

Respectfully submitted,

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